

CLAIM AMENDMENTS

1. (Currently Amended) A semiconductor laser, comprising:
a semiconductor laser cavity having at least one segment and at least one output;
at least one etched gap [located in] extending through said at least one segment; and
at least one distributed Bragg reflector (DBR) at said at least one output.
2. (Original) The laser of claim 1, wherein the total length of said laser cavity is between about 10 μm and about 10,000 μm .
3. (Currently Amended) The laser of claim 1, wherein said at least one etched gap is formed by spaced-apart etched facets in said at least one segment, and wherein said gap has a length of between about 0.0001 μm and about 10 μm .
4. (Original) The laser of claim 1, further including at least one photonic device connected to said at least one output of said laser cavity.
5. (Currently Amended) The laser of claim 1, wherein the laser is a ring laser having multiple segments joined end-to-end.
6. (Original) The laser of claim 1, wherein the laser is a V-shaped laser.
7. (Currently Amended) A semiconductor laser, comprising:
a semiconductor laser cavity having at least one segment and at least one output;
at least one etched gap [located in] extending through said at least one segment of the laser,

at least one photonic device connected to said at least one output of said laser, and

at least an etched facet at or near the Brewster angle at one end of said photonic device.

8. (Original) The laser of claim 7, wherein the total length of said laser cavity is between about 10 μm and about 10,000 μm .

9. (Original) The laser of claim 7, wherein said at least one etched gap has a length of between about 0.001 μm and about 10 μm .

10. (Original) A semiconductor photonic device, comprising:
a cavity having at least one segment; and
at least an etched facet at or near the Brewster angle at one end of said at least one segment.

11. (Original) The photonic device of claim 10, wherein said cavity includes an entrance facet and an exit facet.

12. (Original) The photonic device of claim 10, wherein said entrance facet is directly coupled to another photonic device.

13. (Original) The photonic device of claim 10, wherein said photonic device is a V-shaped structure and wherein said at least one segment includes a first and a second leg.

14. (Original) The photonic device of claim 13, wherein said etched facet at or near the Brewster angle is at an end of said first leg of said V-shaped structure.

15. (Original) The photonic device of claim 14, wherein said first and second legs are joined at corresponding ends to form said V-shaped structure, and wherein an

exit facet is positioned at the joint of the said first and second legs.

16. (Original) The photonic device of claim 15, further including an entrance facet at a free end of said second leg of said V-shaped structure.

17. (New) The laser of claim 5, wherein said at least one segment incorporates multiple etched gaps, each gap extending through said at least one segment.

18. (New) The laser of claim 17, wherein each of said gaps comprises a pair of spaced-apart etched facets.

19. (New) The laser of claim 1, wherein said at least one segment incorporates multiple etched gaps, each gap extending through said at least one segment.

20. (New) The laser of claim 19, wherein said multiple etched gaps comprises first and second gaps spaced apart along said at least one segment and separated by a length of said segment.

21. (New) The laser of claim 20, wherein each said gap comprises a pair of spaced-apart etched facets, each pair of facets forming a gap having a length of between about 0.001 μm and about 10.0 μm extending completely through the laser cavity.

22. (New) The laser of claim 21, wherein each facet is perpendicular to the length of said segment.

23. (New) The laser of claim 21, wherein each said facet is angled with respect to the length of said segment.

24. (New) The laser of claim 23, wherein said length of said segment between

said first and second gaps is offset from adjoining segments to compensate for the refraction of light at the interfaces of the laser segment and said gaps.

25. (New) A semiconductor device, comprising:

a solid state waveguide cavity having an etched entrance facet and an etched exit facet;

an etched gap extending through said solid state waveguide cavity between said entrance and exit facets, said etched gap comprising a pair of parallel etched facets spaced apart by a length of between about 0.001 μm and 10 μm .

26. (New) The device of claim 25, further including multiple etched gaps spaced along said waveguide cavity.

27. (New) The device of claim 26, wherein said gaps are angled, and further including an offset segment of said waveguide cavity between adjacent gaps.

28. (New) The device of claim 26, wherein said solid state waveguide cavity is a ring laser.

29. (New) The device of claim 28, wherein said exit facet is coupled to an input facet of a photonic device.

30. (New) The device of claim 29, wherein said photonic device is a V-shaped waveguide structure having an etched facet at or near the Brewster angle at a distal end.